CLAIMS

What is claimed is:

1. A method for recovering from startup and runtime failures of a software system in a computer environment including a client device, comprising the steps of:

(a) providing a persistent memory in the client device including at least first and second system partitions and at least one package partition, wherein runtime components of the software system are installed on the first and second system partitions and at least the software packages of the software system downloaded from remote servers are saved on the at least one package partition;

(b) designating one of the first and second system partitions as a current system partition and the other of the first and second system partitions as a backup system partition;

(c) using the current system partition by a central processing unit of the client device for controlling the client device;

(d) rebooting the software system of the client device using the backup system partition in response to one of an startup failure, a runtime failure of the software system of the client device, and a user request;

(e) designating the backup system partition as the new current system partition; and

(f) creating a new backup system partition from the new current system partition.

2. The method of claim 1, wherein all installed software packages of the software system are saved on the at least one package partition, said method further comprising the step of reinstalling the entire software system by installing all of the software packages residing on the at least one package partition after said step (f).

3. The method of claim 2, further comprising the step of allowing selective removal of the software packages from the at least one package partition after said step (f).

4. The method of claim 1, further comprising the step of allowing selective removal of the software packages from the at least one package partition after said step (f).

5. The method of claim 1, further comprising the step of:

(g) allowing selective installation of software packages on the first and second system partitions from the software packages saved on the at least one package partition after said step (f).

6. The method of claim 5, wherein said step (g) further comprises using a package management system to determine dependencies between the software packages saved on the at least one package partition.

7. The method of claim 6, wherein said step (g) further comprises the steps of selecting a user selected software package on the package partition for installation in one of the system partitions, determining whether the user selected software package is compatible with existing installed software packages, and blocking installation of the user selected software

package if the user selected software package is not compatible with existing installed software packages.

8. The method of claim 6, wherein said step (g) further comprises the steps of selecting a user selected software package on the package partition for installation in one of the system partitions, determining whether the user selected software package is compatible with existing installed software packages, and outputting a warning if the user selected software package is not compatible with existing installed software packages.

9. The method of claim 6, wherein said step (g) further comprises selecting a user selected software package from the package partition for installation in one of the system partitions, identifying other software packages on the package partitions required for the user selected software package using the package management system, and installing both the selected software package and the other software packages identified by the package management system.

10. The method of claim 1, further comprising the step of performing a software package installation procedure for installing a new software package in the client device before said step (d), wherein the step of installing a new software package includes the substeps of:

(i) receiving the new software package at the client device;

(ii) determining whether the new software package contains a critical component, the critical component being a component that requires a reboot of the client device to run after installation;

(iii) performing an upgrade procedure including installing the new software package in the background system partition if it is determined in said step (ii) that the new software package contains a critical component;

(iv) performing an update procedure including installing the new software package in the current system partition if it is determined in said step (ii) that the new software package does not contain a critical component; and

(v) saving the new software package in the at least one package partition.

11. The method of claim 10, further comprising the step of:

(g) allowing selective installation of software packages on the first and second system partitions from the software packages saved on the at least one package partition after said step (f).

12. The method of claim 11, wherein said step (g) further comprises outputting, by the client device, a list of software packages installed on the system partitions during the most recently performed software package installation procedure.

13. The method of claim 10, wherein said new software package replaces a preexisting software package such that said substep (v) further includes removing the preexisting software package from the at least one package partition after the new software package has been saved.

14. The method of claim 10, further comprising the step of indicating in a non-volatile memory of the computer that the installation process has started after said substep

(i) and indicating in the non-volatile memory after said substep (v) that the installation process is completed.

15. The method of claim 10, wherein said substep (i) comprises receiving the new software package from a remote server via a communication network.

16. The method of claim 15, wherein said substep (i) comprises receiving the new software package from the remote server automatically.

17. The method of claim 15, wherein said substep (i) comprises receiving the new software package in response to a user request.

18. The method of claim 10, wherein said substep (ii) comprises reading a meta-file sent with the new software package to determine whether the package contains a critical component.

19. The method of claim 10, wherein said upgrade procedure of said substep (iii) comprises:

copying the current system partition to the backup system partition;

installing the new software package on the backup system partition;

saving the new software on the at least one package partition;

switching the designations of the current and backup system partitions so that the current system partition includes the new software package; and

rebooting the client device with the current system partition.

20. The method of claim 19, further comprising the step of deleting an old version of the software package from the at least one package partition.

21. The method of claim 19, further comprising the step of updating a package management system of the client device used to determine dependencies between the software packages of the software system.

22. The method of claim 10, wherein said update procedure of said substep (iv) comprises:

installing the new software package on the current system partition; and

saving the new software package on the at least one package partition.

23. The method of claim 22, further comprising the step of deleting an old version of the software package from the at least one package partition.

24. The method of claim 22, further comprising the step of updating a package management system of the client device used to determine dependencies between the software packages of the software system.

25. The method of claim 10, where said substep (iii) is performed if the new software package includes one of at least part of an operating system kernel, a device driver, and at least part of a window system.

26. The method of claim 1, where the client device is one of a personal computer, a personal digital assistant, a mobile phone, a cable television set top box, and a satellite television set top box.

27. A computer system comprising a client device connectable to a server via a communication network for receiving software packages, said client device comprising:

a persistent memory connected to said central processing unit, said persistent memory having two system partitions and at least one package partition, wherein runtime components of a software system of said client device are installed on said two system partitions, one of said two system partitions being designated as a current system partition and the other one of said two system partitions is designated as a backup system partition, and wherein all software packages installed in the computer system are saved on said at least one package partition;

a central processing unit connected to said persistent memory and using said current system partition for control; and

means for automatically rebooting said computer system using the backup partition in response to one of a startup failure, a runtime failure, and a user request to revert to a previous software version.

28. The computer system of claim 27, wherein said client device further comprises means for allowing user selected ones of the software packages from the at least one package partition to be installed on one of the system partitions in response to one of a startup failure, a runtime failure, and a user request to revert to a previous software version.

29. The computer system of claim 27, wherein said client device further comprises a package management system including information regarding the dependencies and version information for each of the software packages on the at least one package partition.

30. The computer system of claim 27, wherein said client device comprises one of a personal computer, a personal digital assistant, and a mobile phone.